**22** The first term of an arithmetic series is $(2t + 1)$ where $t > 0$
The $n$th term of this arithmetic series is $(14t - 5)$

The common difference of the series is 3

The sum of the first $n$ terms of the series can be written as $p(qt - 1)^r$ where $p$, $q$ and $r$ are integers.

Find the value of $p$, the value of $q$ and the value of $r$
Show clear algebraic working.

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$p =$ ..... $q =$ ..... $r =$ .....

**(Total for Question 22 is 4 marks)**

**Turn over for Question 23**

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